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a magnetoresistive effect, said pinned layer comprising an artificial antiferromagnet layer system (AAF), and an exchange biasing layer, the exchange biasing layer being adjacent to and magnetically influencing the AAF layer system, wherein the free and the pinned ferromagnetic layers are separated by a Cu-type layer, the Cu-type layer on both sides being contiguous with a Co or CoFe layer.

2. (Cancelled).
3. (Twice Amended) A device as claimed in claim 1, in which the AAF layer system has an odd number of non-adjacent ferromagnetic layers greater than or equal to three.
4. (Twice Amended) A device as claimed in claim 3, in which the AAF layer system includes three CoFe layers and two intermediate non-magnetic layers.
5. (Amended) A device as claimed in claim 1, in which the exchange biasing layer is arranged between the substrate and the AAF layer system.
6. (Twice Amended) A device as claimed in claim 3, wherein within the odd number of non-adjacent ferromagnetic layers form a stack of layers.
7. (Amended) A device as claimed in claim 6, wherein at least two ferromagnetic layers towards the outside of the stack are thinner than a ferromagnetic layer towards the center of the stack.
8. (Amended) A device as claimed in claim 6, wherein at least two ferromagnetic layers towards the outside of the stack are thicker than a ferromagnetic layer towards the center of the stack.
9. (Amended) A data storage system including a magneto-resistive device according to claim 1.
10. (Amended) A magnetic memory including a magneto-resistive device according to claim